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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/568,616

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EXAMINER

PENG, KUO LIANG

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

06/04/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/568,616	Applicant(s) OKAMOTO ET AL.	
	Examiner Kuo-Liang Peng	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/1/10 Amendment.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,19,20 and 23-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 19-20, 23-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Applicants' amendment and declaration filed March 1, 2010 are acknowledged. Claims 1, 4, 19-20 and 23-24 are amended. Claims 2-3, 5-18 and 21-22 are deleted. Claims 25-26 are added. Now, Claims 1, 4, 19-20 and 23-26 are pending.
2. The present Office action is made non-final because of a new ground of rejection based on the references applied in the previous Office action.
3. Claim objection(s) in the previous Office Action (Paper No. 20090820) is/are removed.
4. Claim rejection(s) under 35 USC 103 in the previous Office Action (Paper No. 20090820) is/are moot in view of the new ground of rejection, *infra*.
5. The text of those sections of Title 35, U.S. code not included in this action can be found in prior Office Action(s).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 20 and 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukunaga (US 6 410 640) as evidenced by Singh (US 4 960 844), and optionally as evidenced by Haddick (US 3 661 885).

For Claim 1, Fukunaga teaches a curable resin composition which contains an organic polymer (a) having at least one reactive silicon group per molecule, and a stannous curing catalyst (d) (col.2, lines 46-51). Examples of the stannous curing catalyst include stannous versatate (col.10, lines 29-31). Fukunaga further teaches that the reactive silicon group contained in the polymer (a) is a group which has a hydroxyl group, or a hydrolyzable group bonded to a silicon atom and can be crosslinked via the formation of a siloxane bond (col.4, lines 41-45), and that particular

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examples of component (a) include those disclosed in a limited list of patents, which include Singh (col.6, lines 21-25). Thus, US Singh teaches a liquid polymer having the formula (Abstract); since the value of p in the formula of Singh is 2 to 4, the number of the NH-C=O group is from 4 to 8. The polymer of Singh having a value of 2 to 4 teaches the organic polymer (A) of the invention with sufficient specificity to constitute anticipation under the statute. Fukunaga further teaches that it is preferable to use an amine compound together with the curing catalyst. (col.10, lines 33-35). The composition can comprise a filler and a plasticizer. (col. 11, lines 5-63) Their amounts are further exemplified in Examples. Furthermore, Fukunaga teaches the employment a preferred amount of a curing catalyst such as stannous versatate containing a quaternary carbon atom adjacent to the carbonyl group of the carboxylate. (col. 10, lines 24-54) ***Examiner notes that although stannous versatate is one of the curing catalysts taught in the reference, Fukunaga does anticipate the instant claims.*** See *In re Sivaramakrishnan*, 673 F.2d 1383, 213 USPQ 441 (CCPA 1982) (The claims were directed to polycarbonate containing cadmium laurate as an additive. The court upheld the Board's finding that a reference specifically naming cadmium laurate as an additive amongst a list of many suitable

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salts in polycarbonate resin anticipated the claims.) For Claims 20 and 24, Examiner notes that the statement “wherein the organic polymer (A) is produced by the following production methods (a) or (b)” is a product-by-process statement. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). For Claim 25, the foregoing stannous versatate is commercially available, which contains C₉-C₁₁ monocarboxylate as taught in Haddick. (col. 1, lines 46-72)

Claim Rejections - 35 USC § 103

8. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga as evidenced by Singh and in view of Emmerling (US 5,554,709).

Fukunaga teaches a curable resin composition, *supra*, which is incorporated herein by reference. Fukunaga does not teach the curable

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composition wherein the organic polymer (A) has on average the number of groups of the general formula (1) per one molecule thereof of the instant claim. However, Emmerling teaches a moisture-curing alkoxysilane-terminated polyurethanes used as sealing and/or adhesive compositions (abstract). Emmerling further teaches that the polyurethane of the invention is obtained by reacting NCO-terminated polyurethane prepolymers with alkoxysilane (col.2, lines 10-51). Emmerling further teaches that the lower the NCO functionality of the NCO-terminated prepolymers, the softer the cured silanized end product of the invention (col.4, lines 53-60). Since the NCO functionality of the prepolymer forms the NH-C=O group of the product, it can be inferred that the lower the number of NH-C=O group of the product, the softer the cured end product. Since the composition of Emmerling and Fukunaga are similar, and both inventions of Emmerling and Fukunaga are in the same field of endeavor-sealants/adhesives-motivated by the desire to form a composition with optimal softness, it would have been obvious to one of ordinary skill in the art to have formed various versions of the composition of Fukunaga, including those wherein the organic polymer has on average 1.5 to 2 groups of NH-C=O per one molecule thereof of the instant claim. Moreover,

it has been held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.

9. Claims 4 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga as evidenced by Singh, and in view of Suzuki (EP 538 881) and Okamoto (WO 03 011978), optionally as evidenced by Haddick (US 3 661 885).

The following column and line numbers pertaining to Okamoto is based on its U.S. equivalent, US 7 115 695.

For Claim 4, Fukunaga teaches a curable resin composition comprising a stannous versatate, *supra*, which is incorporated herein by reference. Fukunaga is silent on the specific use of carboxylic acid. However, Suzuki teaches that organometallic compounds containing tin is expensive and highly toxic. Suzuki further teaches the use of carboxylic acid in place of organometallic compounds in curing a polymer having at least one silicon atom-containing group to the silicon atom of which a hydroxyl group or a hydrolysable group is attached (page 2, lines 9-19). Since the composition of Suzuki is similar to that of Fukunaga, and both

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inventions of Suzuki and Fukunaga are in the same field of endeavor-sealant/adhesive-motivated by the advantages of using carboxylic acid, as taught by Suzuki, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used carboxylic acid in curing the composition of Fukunaga. Furthermore, modified Fukunaga is silent on the carboxylic acid of the instant claim. However, Okamoto teaches a curable composition comprising an organic polymer having at least one silicon-containing group which has a hydroxyl, or hydrolyzable group bonded to the silicon atom and which is crosslinkable by forming siloxane bonds, and a specific metal salt of a carboxylic acid (Abstract, lines 1-5). Okamoto further teaches that in view of availability, cheap price and good compatibility with the organic polymer, the carboxylic acid from which the metal carboxylate is formed is preferably neodecanoic acid, amongst a limited list of carboxylic acids (col.15, lines 61-65), and that in view of its rapid curing rate, the carboxylic acid is more preferably carboxylic acid wherein a carbon atom adjacent to a carbonyl group is quaternary carbon (col.16, lines 1-8). Since the composition of Okamoto is similar to that of modified Fukunaga, and both inventions of Okamoto and modified Fukunaga are in the same field of endeavor-sealant/adhesive-

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motivated by the advantages of carboxylic acid wherein a carbon atom adjacent to a carbonyl group is quaternary carbon as taught by Okamoto, it would have been obvious to one of ordinary skill in the art to have used the carboxylic acid wherein a carbon atom adjacent to a carbonyl group is quaternary carbon of Okamoto, in curing the composition of the invention of modified Fukunaga. For Claim 26, the foregoing stannous versatate is commercially available, which contains C₉-C₁₁ monocarboxylate as taught in Haddick. (col. 1, lines 46-72)

10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga as evidenced by Singh, and in view of Suzuki and Okamoto as applied to Claim 4 above, and further in view of Emmerling.

The difference between Fukunaga as evidenced by Singh, and in view of Suzuki and Okamoto and the present invention is the requirement of the presently claimed polyoxypropylene polymer having the specific number of the groups per one molecule thereof represented by the general formula (I). However, Emmerling teaches a moisture-curing alkoxysilane-terminated polyurethanes used as sealing and/or adhesive compositions (abstract). Emmerling further teaches that the polyurethane of the

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invention is obtained by reacting NCO-terminated polyurethane prepolymers with alkoxysilane (col.2, lines 10-51). Emmerling further teaches that the lower the NCO functionality of the NCO-terminated prepolymers, the softer the cured silanized end product of the invention (col.4, lines 53-60). Since the NCO functionality of the prepolymer forms the NH-C=O group of the product, it can be inferred that the lower the number of NH-C=O group of the product, the softer the cured end product.

Since the composition of Emmerling and modified Fukunaga are similar, and both inventions are in the same field of endeavor-sealants/adhesives-motivated by the desire to form a composition with optimal softness, it would have been obvious to one of ordinary skill in the art to have formed various versions of the composition of modified Fukunaga, including those wherein the organic polymer has on average 1.1 to 2, or 1.5 to 2 NH-C=O groups per one molecule thereof of the instant claim. Moreover, it has been held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.

Response to Arguments

11. Applicant's arguments with respect to Claims 1, 4, 19-20 and 23-26 have been considered but are moot in view of the foregoing new ground(s) of rejection. Specifically, ***Examiner notes that although stannous versatate is one of the curing catalysts taught in the reference, Fukunaga does anticipate the instant claims.*** While not necessarily acceding to the alleged unexpected results, Examiner notes that unexpected results cannot overcome anticipation rejections. *In re Malagari*, 182 USPQ 549 (C.C.P.A. 1974) Evidence of secondary considerations, such as unexpected results or commercial success, is ***irrelevant*** to 35 USC 102 rejections and thus cannot overcome a rejection so based. *In re Wiggins*, 488 F.2d 538, 543, 179 USPQ 421, 425 (CCPA 1973).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck, can be reached on (571) 272-1078. The fax phone number for the

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organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

klp
May 28, 2010

/Kuo-Liang Peng/
Primary Examiner, Art Unit 1796